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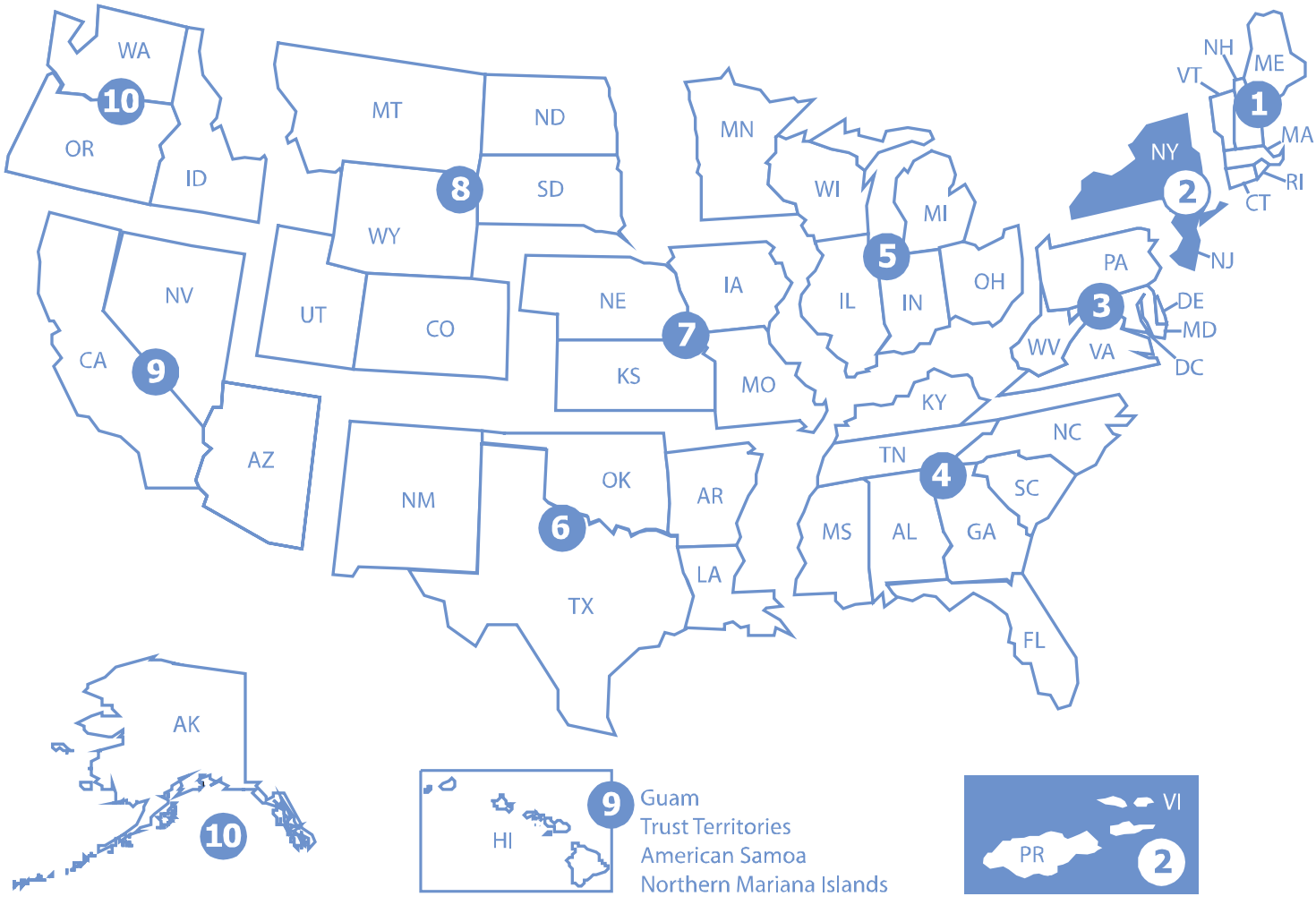
Office of Solid Waste and Emergency Response

Support Document for the Revised National Priorities List Final Rule – San German Groundwater Contamination



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State, Tribal, and Site Identification Center
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EXECUTIVE SUMMARY

Section 105(a)(8)(B) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), requires that the EPA prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. An original National Priorities List (NPL) was promulgated on September 8, 1983 (48 FR 40658). CERCLA requires that EPA update the list at least annually.

This document provides responses to public comments received on the San German Ground Water Contamination site located in San German, Puerto Rico, proposed on September 19, 2007 (72 FR 53509). This site is being added to the NPL based on an evaluation under EPA's Hazard Ranking System (HRS) in a final rule published in the *Federal Register* in March 2008. Several additional sites are being promulgated concurrently.

INTRODUCTION

This document explains the rationale for adding the San German Ground Water Contamination site in San German, Puerto Rico, to the National Priorities List (NPL) of uncontrolled hazardous waste sites and also provides the responses to public comments received on this site. The EPA proposed this site on September 19, 2007 (72 FR 53509). This site is being added to the NPL based on an evaluation under the Hazard Ranking System (HRS) in a final rule published in the *Federal Register* in March 2008.

Background of the NPL

In 1980, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. Sections 9601 *et seq*. in response to the dangers of uncontrolled hazardous waste sites. CERCLA was amended on October 17, 1986, by the Superfund Amendments and Reauthorization Act (SARA), Public Law No. 99-499, stat., 1613 *et seq.* To implement CERCLA, EPA promulgated the revised National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300, on July 16, 1982 (47 FR 31180), pursuant to CERCLA Section 105 and Executive Order 12316 (46 FR 42237, August 20, 1981). The NCP, further revised by EPA on September 16, 1985 (50 FR 37624) and November 20, 1985 (50 FR 47912), sets forth guidelines and procedures needed to respond under CERCLA to releases and threatened releases of hazardous substances, pollutants, or contaminants. On March 8, 1990 (55 FR 8666), EPA further revised the NCP in response to SARA.

Section 105(a)(8)(A) of CERCLA, as amended by SARA, requires that the NCP include

> criteria for determining priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action and, to the extent practicable, take into account the potential urgency of such action, for the purpose of taking removal action.

Removal action involves cleanup or other actions that are taken in response to emergency conditions or on a short-term or temporary basis (CERCLA Section 101[23]). Remedial action is generally long-term in nature and involves response actions that are consistent with a permanent remedy for a release (CERCLA Section 101[24]). Criteria for placing sites on the NPL, which makes them eligible for remedial actions financed by the Trust Fund established under CERCLA, were included in the HRS. EPA promulgated the HRS as Appendix A of the NCP (47 FR 31219, July 16, 1982). On December 14, 1990 (56 FR 51532), EPA promulgated revisions to the HRS in response to SARA, and established the effective date for the HRS revisions as March 15, 1991.

Section 105(a)(8)(B) of CERCLA, as amended, requires that the statutory criteria provided by the HRS be used to prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. The list, which is Appendix B of the NCP, is the NPL.

An original NPL of 406 sites was promulgated on September 8, 1983 (48 FR 40658). At that time, an HRS score of 28.5 was established as the cutoff for listing because it yielded an initial NPL of at least 400 sites, as suggested by CERCLA. The NPL has been expanded several times since then, most recently on September 19, 2007 (72 FR 53463). The Agency also has published a number of proposed rulemakings to add sites to the NPL. The most recent proposal was on September 19, 2007 (72 FR 53909).

Development of the NPL

The primary purpose of the NPL is stated in the legislative history of CERCLA (Report of the Committee on Environment and Public Works, Senate Report No. 96-848, 96th Cong., 2d Sess. 60 [1980]).

> The priority list serves primarily informational purposes, identifying for the States and the public those facilities and sites or other releases which appear to warrant remedial actions. Inclusion of a facility or site on the list does not in itself reflect a judgment of the activities of its owner or operator, it does not require those persons to undertake any action, nor does it assign liability to any person. Subsequent government actions will be necessary in order to do so, and these actions will be attended by all appropriate procedural safeguards.

The NPL, therefore, is primarily an informational and management tool. The identification of a site for the NPL is intended primarily to guide EPA in determining which sites warrant further investigation to assess the nature and extent of the human health and environmental risks associated with the site and to determine what CERCLA-financed remedial action(s), if any, may be appropriate. The NPL also serves to notify the public of sites EPA believes warrant further investigation. Finally, listing a site may, to the extent potentially responsible parties are identifiable at the time of listing, serve as notice to such parties that the Agency may initiate CERCLA-financed remedial action.

CERCLA Section 105(a)(8)(B) directs EPA to list priority sites among the known releases or threatened release of hazardous substances, pollutants, or contaminants, and Section 105(a)(8)(A) directs EPA to consider certain enumerated and other appropriate factors in doing so. Thus, as a matter of policy, EPA has the discretion not to use CERCLA to respond to certain types of releases. Where other authorities exist, placing sites on the NPL for possible remedial action under CERCLA may not be appropriate. Therefore, EPA has chosen not to place certain types of sites on the NPL even though CERCLA does not exclude such action. If, however, the Agency later determines that sites not listed as a matter of policy are not being properly responded to, the Agency may consider placing them on the NPL.

Hazard Ranking System

The HRS is the principle mechanism EPA uses to place uncontrolled waste sites on the NPL. It is a numerically based screening system that uses information from initial, limited investigations -- the preliminary assessment and site inspection -- to assess the relative potential of sites to pose a threat to human health or the environment. HRS scores, however, do not determine the sequence in which EPA funds remedial response actions, because the information collected to develop HRS scores is not sufficient in itself to determine either the extent of contamination or the appropriate response for a particular site. Moreover, the sites with the highest scores do not necessarily come to the Agency's attention first, so that addressing sites strictly on the basis of ranking would in some cases require stopping work at sites where it was already underway. Thus, EPA relies on further, more detailed studies in the remedial investigation/feasibility study that typically follows listing.

The HRS uses a structured value analysis approach to scoring sites. This approach assigns numerical values to factors that relate to or indicate risk, based on conditions at the site. The factors are grouped into three categories. Each category has a maximum value. The categories are:

- likelihood that a site has released or has the potential to release hazardous substances into the environment;
- characteristics of the waste (toxicity and waste quantity); and

- people or sensitive environments (targets) affected by the release.

Under the HRS, four pathways can be scored for one or more threats as identified below:

- Ground Water Migration (S_{gw})
  - drinking water

- Surface Water Migration (S_{sw})
  The following threats are evaluated for two separate migration components, overland/flood migration and ground water to surface water.
  - drinking water
  - human food chain
  - sensitive environments

- Soil Exposure (S_s)
  - resident population
  - nearby population
  - sensitive environments

- Air Migration (S_a)
  - population
  - sensitive environments

After scores are calculated for one or more pathways according to prescribed guidelines, they are combined using the following root-mean-square equation to determine the overall site score (S), which ranges from 0 to 100**:**

$$S = \sqrt{\frac{S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2}{4}}$$

If all pathway scores are low, the HRS score is low. However, the HRS score can be relatively high even if only one pathway score is high. This is an important requirement for HRS scoring because some extremely dangerous sites pose threats through only one pathway. For example, buried leaking drums of hazardous substances can contaminate drinking water wells, but -- if the drums are buried deep enough and the substances not very volatile -- not surface water or air.

Other Mechanisms for Listing

There are two mechanisms other than the HRS by which sites can be placed on the NPL. The first of these mechanisms, authorized by the NCP at 40 CFR 300.425(c)(2), allows each State and Territory to designate one site as its highest priority regardless of score. The last mechanism, authorized by the NCP at 40 CFR 300.425(c)(3), allows listing a site if it meets the following three requirements:

- Agency for Toxic Substances and Disease Registry (ATSDR) of the U.S. Public Health Service has issued a health advisory that recommends dissociation of individuals from the release;
- EPA determines the site poses a significant threat to public health; and
- EPA anticipates it will be more cost-effective to use its remedial authority than to use its emergency removal authority to respond to the site.

Organization of this Document

The following section addresses site-specific public comments. The site discussion begins with a list of commenters, followed by a site description, a summary of comments, and Agency responses. A concluding statement indicates the effect of the comments on the HRS score for the site.

Glossary

The following acronyms and abbreviations are used throughout the text:

Agency	U.S. Environmental Protection Agency
ATSDR	Agency for Toxic Substances and Disease Registry
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Sections 9601 *et seq*., also known as Superfund
CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
FR	Federal Register
HRS	Hazard Ranking System, Appendix A of the NCP
HRS score	Overall site score calculated using the Hazard Ranking System; ranges from 0 to 100
NCP	National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300
NPL	National Priorities List, Appendix B of the NCP
PA/SI	Preliminary assessment/site inspection
PRP	Potentially responsible party
RCRA	Resource Conservation and Recovery Act of 1976 (U.S.C. 9601-6991, as amended)
RD/RA	Remedial design/remedial action
RI/FS	Remedial investigation/feasibility study
ROD	Record of Decision, explaining the CERCLA-funded cleanup alternative(s) to be used at an NPL site
SARA	Superfund Amendments and Reauthorization Act of 1986, Public Law No. 99-499, stat., 1613 *et seq*.

Response to Comments

1. List of Commenters

EPA-HQ-SFUND-2007-0692-0005	Comment submitted by Laura M. Velez, McConnell Valdes LLC on behalf of OMJ Pharmaceuticals and Cordis, LLC
EPA-HQ-SFUND-2007-0692-0005.1	Comment attachment submitted by Laura M. Velez, Esq., McConnell Valdes LLC on behalf of OMJ Pharmaceuticals and Cordis, LLC

2. Site Description

The San German Ground Water Contamination site (CERCLIS ID No. PRN000205957) is located in the municipality of San German, Puerto Rico, and consists of a ground water plume with no identified source(s) of contamination.

The San German Urbano public water system consists of seven wells and two surface water intakes that serve an estimated population of 25,000 people. Three of these wells, Retiro, Lola Rodriguez de Tio I (Lola I), and Lola Rodriguez de Tio II (Lola II), act as an independent interconnected system with approximately 800 connections. The ground water plume was identified by contamination found in the Retiro, Lola I, and Lola II public supply wells. The extent of the plume, however, was not fully characterized prior to proposal to the NPL.

Quarterly ground water samples collected by the system's operator, Puerto Rico Aqueduct and Sewer Authority (PRASA), indicate that the chlorinated solvents tetrachloroethylene (PCE) and *cis*-1,2-dichloroethylene (*cis*-1,2-DCE) were detected in all three wells during the period 2001 to 2005. The maximum concentrations of PCE and *cis*-1,2-DCE detected in these wells during this period were 6.4 micrograms per liter (µg/L) of PCE and 1.2 µg/L of *cis*-1,2-DCE.

On January 17, 2006, the Puerto Rico Department of Health (PRDOH) ordered PRASA to close the Retiro well because of PCE concentrations exceeding the drinking water Maximum Contaminant Level (MCL) of 5 µg/L. The order indicated that in addition to being detected in the Retiro well, PCE was also detected in tap water samples collected from distributed water. PRASA responded to this order by taking the well out of operation on January 19, 2006; the pump was removed on February 1, 2006.

Ground water samples collected by EPA in June 2006 confirm the presence of PCE at 1.6 µg/L and *cis*-1,2-DCE at 1.5 µg/L in Lola I. Trichloroethylene (TCE) was also detected in Lola I at a concentration of 0.54 µg/L. Samples collected from a background well (El Real) showed non-detects for PCE, *cis*-1,2-DCE, and TCE.

In July 2006, EPA conducted a reconnaissance effort at 44 sites within the municipality of San German as part of a site discovery initiative to identify potential hazardous waste sites. In January 2007, EPA conducted a source investigation of three facilities in San German, which were identified as potential sources to the ground water plume. This investigation included two preliminary assessment/site inspections (PA/SIs) and one expanded site inspection (ESI). These investigations included the use of direct-push technology to complete soil borings at each of the facilities. Surface and subsurface soil samples and ground water samples were collected from these borings. Although chlorinated solvents

were detected at two of these facilities, EPA did not identify the source of ground water contamination in the public supply wells during its investigations.

3. Summary of Comments/Correspondence

Laura M. Vélez, Esq., submitted comments on behalf of Cordis, LLC (Cordis) and OMJ Pharmaceuticals (OMJ) regarding the inclusion of Cordis/OMJ in the "Other Possible Sources" section of the HRS Documentation Record for the San German Ground Water Contamination (San German) site as proposed. Specifically, Cordis/OMJ requested that they be "eliminated from any listing of sources of ground water contamination to the Site" and that "future listing of 'potentially responsible parties' should be based on the administrative record as required by the Administrative Procedure Act (APA)."

Cordis/OMJ argued that it was "objectionable" to identify Cordis/OMJ "as a 'possible source to ground water contamination' as stated in the HRS Documentation Record" because the HRS Documentation Record and associated docket material for the San German site as proposed did not contain "any support on the record for EPA's statement in said document"; and as the *Pre-CERCLIS Screen Report, San German Site Discovery Initiative* did not identify Cordis/OMJ as one of the facilities recommended to "be investigated to determine the likelihood of [such] facilities being possible sources to the VOC ground water contamination of public potable supplies." Cordis/OMJ also pointed out that, following the associated investigative efforts at the facility, EPA concluded that "all storage areas were observed to be in good condition with no apparent spills or discharges" and that "[a] review of on-site documentation provided by Cordis did not indicate that PCE or TCE is used or stored at the [Cordis/OMJ facility]."

In response, the identification of Cordis/OMJ as a possible source of contamination has no impact on the HRS scoring of the San German site or the site's eligibility for placement on the NPL. Further, EPA considers the inclusion of the Cordis/OMJ facility as "Other Possible Sources" to be appropriate because of the manufacturing operations conducted there, as more fully described on page 16 of the HRS documentation record as proposed.

The HRS is the principal mechanism EPA uses to place uncontrolled waste sites on the NPL. It is a numerically based screening system that uses information from initial, limited investigations such as a PA and an SI to assess the relative potential of sites to pose a threat to human health or the environment.

As part of the PA and the SI, an off-site reconnaissance (in addition to on-site reconnaissance) is generally performed to collect information about the surrounding area (see 40 CFR 300.420). This information may include but is not limited to potential hazardous waste sources, evidence of hazardous substance migration; populations; geologic, hydrologic, and environmental conditions; and resources that might be threatened by releases of hazardous substances. EPA uses the information gathered from the PA and SI, including information from any off-site reconnaissance, to evaluate releases under the HRS. In this case, where a source of contamination has yet to be determined, it is appropriate and reasonable for EPA to describe in the HRS documentation record the results of off-site investigations performed in the vicinity. Identifying the Cordis/OMJ facility in the HRS documentation record in no way assigns or imputes the release to Cordis/OMJ - nor did EPA make any such statements. As described in the proposed rule, the HRS is solely a screening device to assist EPA with making a preliminary division between sites that justify further consideration and those that do not (see also Eagle-Picher Industries, Inc. v. U.S. Environmental. Protection Agency, *et al*., 759 F.2d 905, 921-922 [D.C. Cir. 1985]). The nature and extent of the release will be further defined through a remedial investigation/feasibility study (RI/FS) (see 40 CFR 300.430). During the RI/FS process, the release may be found to be larger or smaller than was originally thought as more information is gathered. Much of the new information will build on information obtained from the PA and SI, including information obtained from any on-site and off-site reconnaissance.

The mention of Cordis/OMJ has no effect on the HRS score for the site, nor would its removal from the HRS documentation record for the San German site as proposed. An HRS site score is the result of an evaluation of contaminant migration in at least one of four pathways – ground water migration, surface water migration, soil exposure, and air migration pathways. Each pathway score is based upon the product of three factor category values: (1) likelihood of release, (2) waste characteristics, and (3) targets. (See, for example, HRS Section 2.1.2, *Calculation of Pathway Score*, and Table 3-1, *Ground Water Migration Pathway Scoresheet*.) The HRS score for the San German site was the result of an evaluation of the ground water migration pathway using information gathered during the PA and SIs. Specifically, no release was identified as from the Cordis/OMJ facility, thus its mention has no effect on the likelihood of release value; no waste was associated with the Cordis/OMJ facility, thus its mention has no effect on the waste characteristics value; and the Cordis/OMJ facility itself was not considered or evaluated as a target in the HRS documentation record for the San German site as proposed. (See HRS Sections 3.1.1, *Observed Release*; 3.2, *Waste Characteristics, et seq*.; and 3.3, *Targets, et seq*., respectively; as well as HRS Section 2.1.3, *Common Evaluations*).

Furthermore, the commenter may be equating identification of a possible source with the identification of a potentially responsible party (PRP). The identification of PRPs is a separate step in the Superfund remediation process. If Cordis/OMJ is in fact identified as a PRP for the San German site in a subsequent step in the Superfund process, it will have an opportunity to comment at that time. As noted throughout the proposed rule, liability is not considered in evaluating a site under the HRS. The NPL serves primarily as an informational tool for use by the Agency in identifying those sites that appear to present a significant risk to public health or the environment. It does not reflect a judgment on the activities of the owner(s) or operator(s) of a site. It does not require those persons to undertake any action, nor does it assign any liability to any person. This position, stated in the legislative history of CERCLA, has been explained more fully in the *Federal Register* (48 FR 40759, September 8, 1983 and 53 FR 23988, June 24, 1988). See also Kent County v. EPA, 963 F.2d 391 (D.C. Cir. 1992).

4. Conclusion

The original HRS score for this site was 50.00. Based on the above response to comments, the score remains unchanged. The final scores for the San German Ground Water Contamination site are:

Ground Water:	100.00
Surface Water:	Not Scored
Soil Exposure:	Not Scored
Air Pathway:	Not Scored
HRS Score:	50.00